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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,160	09/22/2005	Matthew J. Thiele	20020026	7511
22500	7590	06/24/2008	EXAMINER	
BAE SYSTEMS			JUNG, MIN	
PO BOX 868			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,160	Applicant(s) THIELE ET AL.	
	Examiner Min Jung	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 3-4, it is not clear if the reconfigurable compute engine includes an application layer, a physical layer, and an interconnect fabric?

In claim 15, lines 6-7, the phrase containing "...functions of the inputs to and outputs of the engine...." is unclear in meaning; it seems the sentence is tangled.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 10, 11, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Niu et al., US 6,721,312 (Niu).

Niu discloses method and apparatus for improving data transmission in router fabric card through pseudo-synchronous data switching.

Regarding claims 1 and 15, Niu teaches a system in which reconfigurable compute engines (router fabric card 44, col. 1, lines 16-24, col. 6, lines 21-236) have input and output pins (input and output ports IFCAs 15 and EFCAs 29) and are interconnected to perform a predetermined function (packets are sent to and from neighboring routers, col. 3, lines 7-10) and in which each of the reconfigurable compute engine includes an application layer and a physical layer (As is well known in the art, application layer refers to functions for particular application, which is present with any device. Therefore, Application layer is the actual routing function inherent in the router of Niu. The physical layer is the actual circuit used in the router 44). Niu further teaches an interconnect fabric comprising a reconfigurable interconnect layer between the application layer and the physical layer for defining the identity and function of the input and output pins so as to effectuate the interconnection of the reconfigurable compute engines to perform the predetermined function (crossbar switch 19 with the CSA 23, col. 4, lines 21-48 and col. 6, lines 21-36, CSA controls programming and scheduling of CPAs. CSA utilizes control lines to deliver port configuration assignments to each CPA).

Regarding claims 10 and 11, Niu teaches that the router fabric card functions include spatial processing (space switching by crosspoint switch, col. 4, line 24) and communication.

Regarding claim 16, Niu teaches that the inputs and outputs occur at pins selected by the reconfigurable interconnect layer (CSA controls port configuration thereby inputs and outputs occurring at the selected port).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-9, 12-14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niu.

Regarding claims 2-9, 12-14, 17, and 18, Niu fails to teach the specific details recited. However, the recited details are regarding design features, some of which are inherent in connecting two computing engines to make it functional. For connecting two routers taught in Niu, it would have been obvious for one of ordinary skill in the art at the time of the invention to provide complementary ports (pins) for communication therebetween, to provide timing signals, to support circuit switched signals and/or packet switched signals, and to implement it using a field programmable array, because

these features are well known features in the filed of the invention and therefore can be readily adopted to implement the router engine taught by Niu.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Foster et al. patent, the Lee et al. patent, the Koziy et al. patent, the Georgiou et al. patent, and the Arai PG Pub, are cited for further references.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 571-272-3127.

The examiner can normally be reached on Monday through Friday 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Min Jung/
Primary Examiner, Art Unit 2616